

# The missing ingredients:

are policy-makers doing enough  
on water, sanitation and hygiene  
to end malnutrition?

# Introduction

**“There’s a threat that has escaped the world’s serious attention... the unconscionably high rates of childhood stunting in middle- and low-income countries.”**

World Bank Group President, Jim Yong Kim<sup>1</sup>

Governments around the world have committed to end malnutrition by 2030. However, international and national nutrition plans and actions will fail if they don’t include all the ingredients for success. Evidence shows that scaling up nutrition-specific interventions to 90% coverage in 34 of the countries with the highest burden of child undernutrition, will only reduce stunting by 20%.<sup>2</sup>

This report highlights why water, sanitation and hygiene (WASH) are essential for nutrition. Through an analysis of nutrition and WASH plans and policies in 13 countries, gaps and ways of working are identified. Rather than just making demands for more integration, the research highlights where this is already being done well at policy level and where and how improvements must be made.

A holistic approach is needed that addresses both the basic and underlying causes of undernutrition, which include the education, health, agriculture, and WASH sectors. The development of nutrition-sensitive approaches within these sectors is vital to end malnutrition. At the same time, this offers unique opportunities to achieve each sector’s goals.

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## **Nutrition-specific interventions**

address the immediate causes of sub-optimum growth and development.

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## **Nutrition-sensitive interventions**

address the underlying determinants of malnutrition and incorporate specific nutrition goals and actions.<sup>3</sup>



## Recommendations for action:

- Governments must strive for effective cross-ministerial and multi-stakeholder processes and mechanisms at different levels to drive more coordinated and integrated planning and implementation.
- UN agencies, donors, technical agencies and international non-governmental organisations (NGOs) must seek to invest in and incentivise effective nutrition-WASH integration by strengthening institutional processes, and increasing the breadth and quality of nutrition-sensitive WASH investments. The tracking of these investments should be strengthened through improving the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) Common Reporting Standard (CRS) codes for nutrition-sensitive spending..
- Governments, the World Health Organization (WHO) and the Scaling Up Nutrition (SUN) movement must make all national nutrition and WASH policies and plans publicly available online (for example through the Global Database on the Implementation of Nutrition Action for nutrition policies and plans), enabling better tracking, research and analysis, while fostering stronger accountability to citizens and civil society organisations, and promoting constructive cross-country learning.
- International institutions, NGOs and academics must collaborate to implement research that strengthens the evidence base for effective nutrition-WASH collaboration and integration, and seek to share lessons and good practice.
- The governments of Brazil, the UK and Japan, supported by WHO and the Food and Agriculture Organization of the United Nations (FAO), must ensure that the ongoing Nutrition for Growth process generates international and national action on effective nutrition-sensitive investments, with WASH at the forefront.

# The context

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There are strong links between undernutrition and WASH, with an estimated 50% of undernutrition associated with infections caused by poor WASH,<sup>4</sup> contributing to 860,000 preventable deaths per year in children under five.<sup>5</sup>

## The evidence

Emerging evidence over recent years has improved the understanding of the multiple pathways through which poor WASH impacts on nutrition. This includes evidence from a number of trials,<sup>6</sup> along with observational studies<sup>7</sup> and theoretical evidence.<sup>8</sup> **At least three biological mechanisms have been identified, linking WASH to undernutrition:**

- repeated bouts of diarrhoea
- intestinal parasitic infections
- environmental enteric dysfunction (EED)<sup>9</sup>

There may also be several other important WASH-related social and economic pathways.

Two randomised control trials – the SHINE trial<sup>10</sup> and WASH Benefits study<sup>11</sup> – are currently underway, which are expected to add substantially to the evidence base on the links between nutrition and WASH.

## What is this analysis?

The Sanitation and Hygiene Applied Research for Equity (SHARE) consortium and WaterAid analysed national nutrition plans and policies in 13 countries to ascertain the extent to which WASH is embedded. To complement this, a rapid analysis was conducted of those countries' WASH sector policies and plans for reference to nutrition-related terms and activities. The analysis was carried out to understand and share different approaches to coordinating and integrating nutrition and WASH within national policies and plans.

## Ways of working: a continuum approach

Growing evidence of the links between nutrition and WASH has contributed to building momentum for better coordination, collaboration and integration. However, the definitions that different sectors, individuals and organisations use for 'integration' vary considerably along a continuum. This ranges from very minimal coordination and collaboration on one side, through to a more closely integrated and jointly delivered programme on the other.

At the lower end, this coordination could involve the sharing of information, or the co-existence or overlap of nutrition and WASH activities, implemented in the same geographic area simultaneously, or nutrition plans linking to WASH policies, but with little collaboration between them. At the other end of the continuum, an integrated programme entails a much more comprehensive and formalised relationship, where nutrition and WASH programmes are jointly delivered through coordinated interventions with the same geographical focus and target groups, shared staffing, a single budget, and harmonised indicators in a common monitoring and evaluation (M&E) system.<sup>12</sup>

**There are many different approaches to working together along this continuum, and the most effective approach will depend on a multitude of factors such as:**

- the specific national and local context, including the nutrition challenges
- the WASH services and infrastructure available or lacking
- the stakeholders involved
- the level of political will to champion cross-governmental funding and institutional structures



Credit: WaterAid/ Kate Holt

The chosen approach to collaboration between nutrition and WASH activities along this continuum should be determined by these factors and influenced by the potential incentives of working closer together. Given there is no single blueprint for working together, lessons learned from different approaches should be carefully documented and disseminated.<sup>13</sup>

### **Coordination in national policies and plans**

Nutrition is not a 'sector' with an obvious ministry responsible for its delivery. Nutrition is a multi-sectoral issue by its very nature, requiring coordination across different sectors and ministries. In some cases, this coordination is done through a ministry (for example the Ministry of Agriculture or the Ministry of Health) but in other cases, nutrition is led by

the president or prime minister's office, often through a nutrition committee composed of different ministries.

The WASH sector, while often understood to be a more clearly defined 'sector', in fact requires cross-ministerial and cross-sector coordination as well. In many countries, multiple ministries have divided responsibility for water supply, sanitation and hygiene. Delivery of large-scale WASH services may fall to one ministry, but requires effective coordination with planning, health and education policy-makers.

Consequently, a critical first step in aligning stakeholders and investments towards a shared objective is for national policies and plans to lay the groundwork for creating an enabling environment that will allow different ways of collaborating and integrating approaches – this was the focus of our analysis.

# Methodology

Countries selected for analysis were based on SHARE's focus countries and WaterAid's country programmes, for which national multi-sectoral nutrition action plans or strategies – subsequently referred to as 'plans' – were freely available online.

## The 13 countries analysed were:

- Bangladesh
- Kenya
- Liberia
- Madagascar
- Malawi
- Mozambique
- Nepal
- Rwanda
- Sierra Leone
- Tanzania
- Timor-Leste
- Uganda
- Zambia

Multi-sectoral national nutrition action plans were the primary focus of the analysis due to their specificity and role in directing national implementation. However, to get a comprehensive picture, national nutrition policies were also briefly reviewed. The pre-defined criteria used to review plans and policies are listed in Tables 1 and 2, respectively.

**Table 1: Criteria for reviewing national nutrition action plans**

 <b>1.</b> Is WASH recognised and mentioned as an underlying and important factor in nutrition? If so, does this relate to water, sanitation or hygiene, or all three elements?	 <b>6.</b> To what degree do these activities or interventions include all three WASH elements?
 <b>2.</b> Are all three components of WASH mentioned?	 <b>7.</b> Do any indicators or targets relate to WASH?
 <b>3.</b> Is WASH included as part of a strategic aim, objective or key priority?	 <b>8.</b> Is there budget outlined for WASH activities?
 <b>4.</b> Are WASH activities or interventions defined?	 <b>9.</b> Were the ministries responsible for water and sanitation involved in developing the plan?
 <b>5.</b> If so, are the roles and responsibilities for these clearly set out?	 <b>10.</b> Do the different structures, coordinating mechanisms or review groups in place include representatives from the ministries responsible for water and sanitation?

## Table 2: Criteria for reviewing national nutrition policies

1. Is there a current national nutrition policy that the action plan seeks to operationalise?
2. Does the policy include reference to WASH in its background or context?
3. Is WASH included as a specific objective or priority area?
4. Is WASH included as an intervention under any strategic objective?

In addition, a keyword search of nutrition terms (Table 3) in national WASH plans and policies of the 13 countries was conducted to allow for a basic assessment of whether these plans include nutritional considerations.

## Table 3: Analysis of national WASH policies and plans

### Keyword search

- agriculture
- anaemia
- (breast)feeding
- food
- micro(nutrient) deficiency
- nutrition (which also captures 'malnutrition', 'undernutrition')
- stunting
- under(weight)
- wasting



# Key findings

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## Nutrition policies

The analysis of national nutrition policies found strong recognition that poor WASH is an underlying cause of malnutrition in 11 of the 13 countries analysed (the policies for Mozambique and Tanzania were not found). In general, the emphasis was around the need to coordinate and work across multiple sectors. Some policies highlighted specific WASH objectives, while others talked more generally about nutrition-sensitive sectors as a whole. Most of the policies related directly to the action plans, which are described as the 'operationalisation' or 'implementation' of the policy (Bangladesh, Kenya, Liberia, Madagascar, Malawi, Nepal, Rwanda, Sierra Leone and Zambia).

## Nutrition plans

As with the policies, all of the 13 action plans included recognition of the importance of WASH for nutrition, with many referring to UNICEF's Conceptual Framework of Malnutrition developed in 1990.<sup>14</sup> However, the degree to which WASH is embedded within plans, in terms of specific objectives, targets, interventions and indicators, varies significantly across countries. The following map and annex summarise the key findings for each country.

In particular, there are key differences in how WASH interventions are defined and prioritised in countries, with very few plans acknowledging the role of both infrastructural and behaviour-change aspects of WASH. The WASH interventions especially important for nutritional outcomes, including food hygiene and those that address child-related behaviours and risk factors such as safe disposal of child faeces, are also largely absent from most plans, with the exception of Nepal, Rwanda, Sierra Leone, Timor-Leste and Zambia. Stark differences are seen in the level of priority given to WASH. Only

four countries (Madagascar, Nepal, Timor-Leste and Zambia) specify a WASH-related objective. In comparison, other plans (Kenya, Liberia and Tanzania) outline limited inclusion of WASH activities, with no clear objective, poorly defined activities, and limited detail on indicators, targets and those responsible for their delivery.

Of the plans analysed, a detailed budget for activities was not generally included in the same document, limiting the ability to capture the budget for WASH activities. While some plans did include budget, this was broken down at the level of the objectives or priority areas, and not by activity. An analysis of the costing in detail would complement this analysis but was not possible within the scope of this research.

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## Stark differences are seen in the level of priority given to WASH.

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Despite the differences between countries, in general, plans indicated that there are strong national-level institutional arrangements in place to facilitate cross-sectoral and cross-ministerial collaboration on nutrition (e.g. inter-ministerial steering or technical committees), with the ministries responsible for WASH being recognised as important representatives on these. A number of countries (Mozambique, Nepal, Rwanda and Timor-Leste) also included specific mention of the institutional arrangements at provincial and/or district level to foster cross-sectoral coordination at lower levels of government. There are also examples of nutrition coordination committees under the leadership of the president or prime minister's office (Timor-Leste and Uganda), or a particular ministry, such as the Ministry of Agriculture (Liberia).

Overall, based on this limited set of pre-defined criteria, Nepal and Timor-Leste have the strongest plans in terms of integrating WASH



into nutrition plans. The mechanisms in place to ensure close coordination across ministries include cross-ministerial committees in both countries, a memorandum of understanding (MoU) between implementing partners (Timor-Leste), and active involvement of the WASH ministry in developing the plan (Nepal). Both countries cite WASH rates as one of several criteria that will be used to determine which districts to roll out and scale-up implementation of the nutrition plan.

### WASH policies and plans

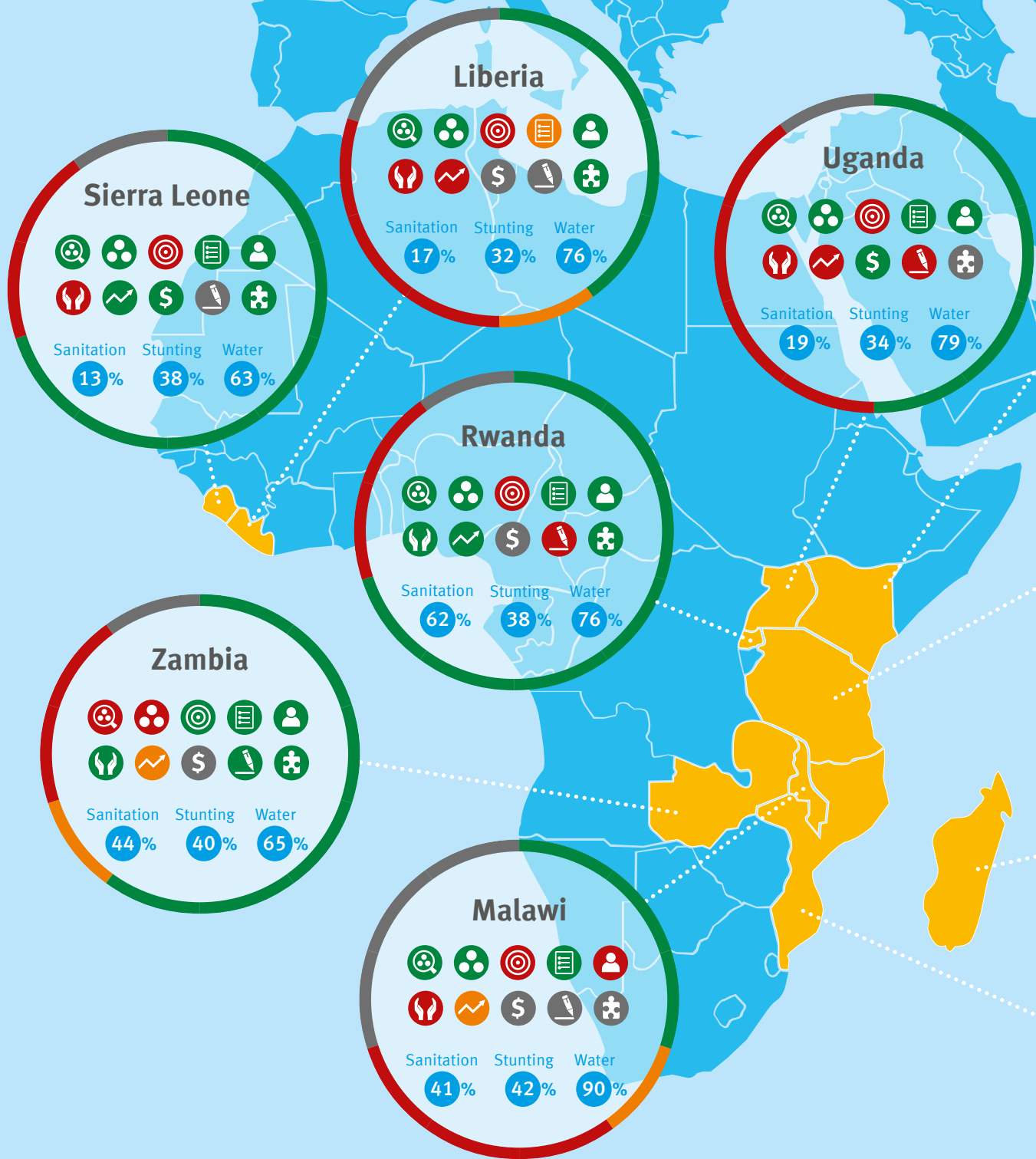
It was not always possible to find the most up-to-date WASH policies and plans online, and these varied considerably in terms of the type, focus and ministry responsible across the 13 countries. Broadly speaking, the majority did not recognise nutrition or refer to the importance of WASH in combatting undernutrition. Mentions of nutrition were almost entirely absent from the plans and policies analysed from Madagascar, Mozambique, Tanzania and Zambia. In other countries, there were clear differences between water supply policies and those related to sanitation and hygiene (often produced by different government ministries), with water plans making no connection to nutrition and focusing primarily on the importance of water for agriculture and food production. Sanitation and hygiene plans, often under the Ministry of Health, in contrast, did tend to make a clearer connection to human health and nutrition.

Of the countries analysed, Liberia is notable for its more thorough recognition of the role of WASH in improving nutrition and health. The plan outlines a number of opportunities for incorporating WASH into existing national health and nutrition programmes and campaigns, which it identifies as a key priority.



# National nutrition plans

How well are water, sanitation and hygiene integrated?



Stunting % source: Global database on child growth and malnutrition, joint child malnutrition estimates – levels and trends (2015 edition), UNICEF-WHO-The World Bank Group. Timor-Leste: G-RDTL 2013, Timor-Leste Food and Nutrition Survey 2013. Dili: MoH.

Stunting definition: Moderate and severe: percentage of children aged 0-59 months who are below minus two standard deviations from median height-for-age of the WHO Child Growth Standards. Sanitation and water % source: WASHWatch (accessed 15/04/16), which uses WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation – 2015 data.

## Kenya



Sanitation 30% Stunting 26% Water 63%

## Nepal



Sanitation 46% Stunting 37% Water 92%

## Bangladesh



Sanitation 61% Stunting 36% Water 87%

## Tanzania



Sanitation 16% Stunting 35% Water 56%

## Timor-Leste



Sanitation 41% Stunting 52% Water 72%

## Madagascar



Sanitation 12% Stunting 49% Water 52%

## Mozambique



Sanitation 21% Stunting 43% Water 51%

### Key

- WASH in background analysis
- All three components of WASH included
- WASH objective included
- WASH activities included
- WASH roles and responsibilities defined
- Comprehensive WASH interventions
- WASH targets and indicators included
- Budget for WASH activities
- WASH ministry involved in planning
- Structures, coordinating mechanisms and/or review groups include WASH ministry

### Statistics

- % of population with 'improved' sanitation
- % of children under five stunted
- % of population with 'improved' water

### Performance rating

- Well integrated
- Partial
- Needs improving
- Unknown

# From words to action: moving the integration agenda forward

A multi-sectoral approach to improving nutrition is not a new concept, having been of interest to the nutrition community since the 1970s. The development of UNICEF's 1990 Conceptual Framework on Malnutrition was particularly important in acknowledging the role of the environment, including poor WASH, as an underlying cause of undernutrition.<sup>15</sup> Despite this, experience over the decades in coordinating different ministries, often in the absence of high-level political support and direction for nutrition, has hindered the implementation of multi-sectoral efforts. Renewed interest and new initiatives, particularly the Scaling Up Nutrition (SUN) movement, the Nutrition for Growth (N4G) process, and the *Global Nutrition Report*, have helped raise the political profile of nutrition. Consequently, many countries have successfully developed national multi-sectoral nutrition action plans, with clear direction for relevant sectors, allowing effective engagement and alignment of all stakeholders.

Although much attention and effort have been directed into developing these multi-sectoral action plans, a lot of work is still needed to

clearly define and embed WASH, including guidance on how a cross-sectoral approach can be put into practice. Even less is understood about how nutrition can be mainstreamed into WASH policies and plans, to ensure a fully coordinated approach is being implemented. Analysing national nutrition and WASH plans and policies provides important insights into the different policy processes in place to facilitate coordination and integration. These lessons can inform the development of new plans, many of which are currently being prepared.

## What does this look like for nutrition and WASH?

There is no single blueprint for how WASH should be embedded in nutrition plans, nor how WASH programmes can become more nutrition-sensitive, as this will depend largely on context. However, in countries with a high burden of chronic undernutrition, consideration of some of the key principles and approaches to WASH-sensitive nutrition and nutrition-sensitive WASH can help drive progress. These are explored in Table 4.



**Table 4: Principles and approaches for nutrition and WASH collaboration**

### **WASH-sensitive nutrition**

**Multi-sectoral nutrition action plans, by their very nature, require coordination with multiple sectors. Enhancing the WASH-sensitivity of plans includes a variety of approaches:**

- Including specific WASH-related objectives, activities, targets and indicators.
- Prioritising multiple components of WASH, including quality infrastructure and uptake of services through demand creation and behaviour change.<sup>16</sup>
- Integrating hygiene behaviour change into nutrition-specific interventions.
- Combining behaviour change interventions to enhance coverage and effectiveness through using multiple delivery channels, while pooling expertise and resources. Innovative methods for behaviour change, such as the ‘Evo-Eco’ approach, which incorporates insights from human motivation, habit and disgust, could be explored to gain a better understanding of whether nutrition and hygiene behaviours have similar motivations.<sup>17,18</sup>

### **Nutrition-sensitive WASH**

**Designing WASH interventions through the lens of nutrition may encourage more innovation, reach and breadth through:**

- Including specific nutrition objectives and focusing on nutrition outcomes in plans, so WASH programmes can be designed to maximise their impact on nutrition.
- Targeting interventions at nutrition-vulnerable populations, age groups or geographical areas, offering unique opportunities to drive progress on WASH goals, not only in terms of delivering on equity and the fulfilment of universal human rights<sup>19</sup> but also through the potential to deliver better quality and more comprehensive programmes.
- Using WASH programmes as a delivery platform for nutrition-specific interventions (such as promoting exclusive breastfeeding in hygiene programmes).
- Increasing the focus on children by targeting child-related behaviours and risk factors, such as safe disposal of child faeces, complementary food hygiene and hygiene of children’s hands.<sup>20,21</sup>

Strong incentives exist for nutrition plans and policies to incorporate WASH components; however, the incentives for the WASH sector to make programmes more nutrition-sensitive are not always clear, especially when such programmes may be more challenging to design, costlier to implement, and require additional expertise and indicators. In other words, unlike those responsible for nutrition, the WASH sector is not dependent on nutrition

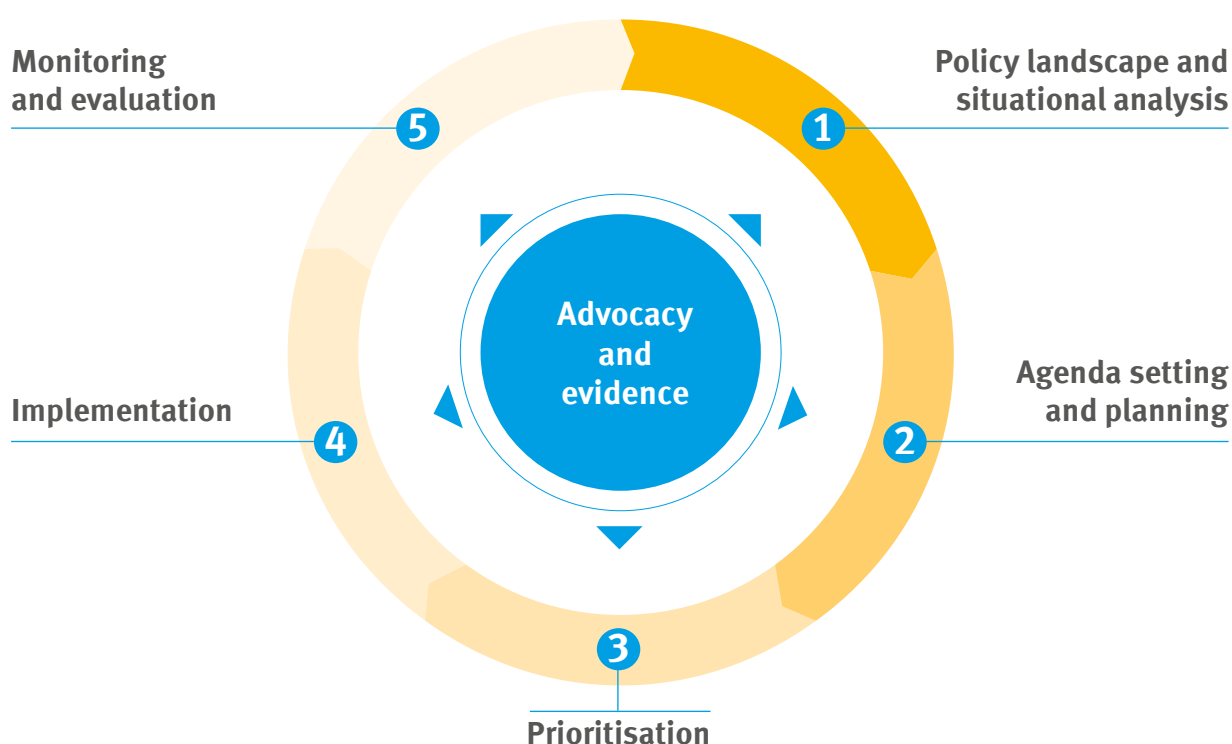
action for achieving its primary objectives. That said, both nutrition and WASH policy-makers share a common vision and goal of improving health, and evidence shows that public health aims have been a key driver of investments in WASH, particularly sanitation, over the decades.<sup>22</sup> Working together can also leverage investments across the two sectors to maximise health impact and improve cost-effectiveness.

## From words to action: moving the integration agenda forward (continued)

### Coordination and collaboration through the policy cycle

Inherent differences in the objectives, outcomes of interest, and people involved in delivering nutrition and WASH programmes present a number of challenges to working together. It is for this reason that collaboration and integration should be seen along a continuum.<sup>23</sup> In order for nutrition and WASH stakeholders to work together along any point of this continuum, an enabling environment, including strong policy frameworks and processes, is needed.

The findings from this analysis, along with existing evidence and lessons learned to date, provide insights into the different ways of working to enhance nutrition and WASH coordination and collaboration across different stages of the policy cycle. These are explored here, with examples drawn from some of the 13 countries analysed, and supplemented by other evidence and experience.



#### The role of advocacy and evidence

- Global and national evidence and advocacy are necessary to inform and strengthen the design, delivery and evaluation of multi-sectoral policies and programmes.

- At the global level, platforms such as the SUN movement and the Sanitation and Water for All (SWA) partnership have a role to play in building high-level political support for collaboration.

- National-level platforms can foster collaboration and coordination; for example, by ensuring WASH representation in SUN country platforms, and including nutrition stakeholders in WASH sector platforms and reviews.

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## 1 Policy landscape and situational analysis

- Developing a multi-sectoral action plan is context-specific and requires a situational analysis, incorporating reviews from different sectors.
- In Nepal, a water and sanitation sector review was conducted to inform the nutrition action plan and identify specific areas of intervention and gaps.
- Local evidence and information is particularly important to ensure strategies developed are relevant for the particular setting.

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## 2 Agenda setting and planning

- Involvement of relevant ministries in the early stages of planning helps build ownership by each sector.
- Institutional nutrition coordination mechanisms, including high-level government support under the leadership of the president or prime minister, along with vertical coordination structures throughout government, have been acknowledged previously as an important driver of successful multi-sectoral approaches.<sup>24,25</sup>
- In Timor-Leste, the ministries responsible for WASH are included in national and district-level nutrition committees, and have signed an MoU to re-affirm their commitment to implement the strategy and allocate additional resources from their respective sectoral budgets for nutrition.

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## 3 Prioritisation

- Inclusion of a high-level WASH and nutrition objective in respective plans will require key activities, indicators, targets and budget in order to deliver on the objective.
- Planning and implementation require close coordination with the ministries responsible for delivering WASH services, ensuring these objectives and activities are aligned with their own sector's plans and budgets.
- Ensuring nutrition is applicable to WASH sector mandates requires the right incentives at different levels.
- In Nepal, sanitation coverage data was used to determine in which districts to scale up the nutrition plan.

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## 4 Implementation

- Hygiene offers promising opportunities to integrate into nutrition and WASH. In Rwanda, hygienic latrines, handwashing and food hygiene were the WASH interventions that were prioritised.
- The use of multiple delivery channels could provide useful platforms for aligning behaviour-change strategies.

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## 5 Monitoring and evaluation

- The collection and use of data is critical to coordination. Specific targeting of communities requires data to be disaggregated at different levels, and made easily accessible for use by different ministries.
  - More work is needed to better identify the most appropriate indicators to measure the impact of WASH for nutrition outcomes, beyond diarrhoea prevalence.
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# Recommendations

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There is sufficient evidence linking poor WASH to undernutrition to warrant greater coordination, alignment and integration of nutrition and WASH plans and programmes. Achieving this at scale, and in a way that is sustainable, requires high-level political leadership, combined with national policy frameworks and processes to drive priorities and coordinate ministries.

Although policies and plans alone do not result in automatic improvements in programme delivery, effective integration in national policies and plans forms a core part of the institutional mechanisms that will drive and monitor delivery of, and also leverage the necessary progressive reforms critical to achieving, nutrition and WASH goals.

**All stakeholders have important roles to play to ensure actions and investments will achieve the ambitions of Agenda 2030. It is recommended that:**

- **Governments** strive for effective cross-ministerial and multi-stakeholder processes and mechanisms at different levels to drive more coordinated and integrated planning and implementation.

- **UN agencies, donors, technical agencies and international non-governmental organisations (NGOs)** seek to invest in and incentivise effective nutrition-WASH integration by strengthening institutional processes, and increasing the breadth and quality of nutrition-sensitive WASH investments. The tracking of these investments should be strengthened through improving the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) Common Reporting Standard (CRS) codes for nutrition-sensitive spending.
- **Governments, the World Health Organization (WHO) and the Scaling Up Nutrition (SUN) movement** make all national nutrition and WASH policies and plans publicly available online (for example through the Global Database on the Implementation of Nutrition Action for nutrition policies and plans), enabling better tracking, research and analysis, while fostering stronger accountability to citizens and civil society organisations, and promoting constructive cross-country learning.
- **International institutions, NGOs and academics** collaborate to implement research that strengthens the evidence base for effective nutrition-WASH collaboration and integration, and seek to share lessons and good practice.
- **The governments of Brazil, the UK and Japan**, supported by WHO and the Food and Agriculture Organization of the United Nations (FAO), ensure that the ongoing Nutrition for Growth process generates international and national action on effective nutrition-sensitive investments, with WASH at the forefront.





## Annex: Summary of findings from nutrition and WASH plans

	Summary of analyses of nutrition plans	Summary of analyses of WASH plans
Bangladesh	<p><b>National Food Policy Plan of Action (2008-15)</b></p> <p>The plan includes 26 strategic areas of intervention, of which one is focused on water and sanitation, with actions primarily focused on infrastructural improvements and strengthening local government capacity. The plan does not adequately acknowledge the importance of behaviour change aspects, with no actions, targets or indicators focused on personal or food hygiene. There is a target on water and sanitation facilities available and accessible for all by 2010, with a number of input and outcome indicators, but this is not realistic or specific. The mechanism for inter-ministerial coordination is through the Food Policy Working Group which includes 13 members from across government with representation of the WASH sector through the Ministry of Local Government, Rural Development and Cooperation. However, this is at the national level, with no indication of how actions will be coordinated at lower levels of government.</p>	<p><b>Sector Development Plan (2011/12-25) Water and Sanitation Sector</b></p> <p>The plan makes reference to the connections between WASH and malnutrition, specifically referring to the 'F diagram'. The plan also flags the particular vulnerability of certain populations to malnutrition connected to WASH. However, the focus on water is more in relation to agriculture and the potential impact of climate change on water supply.</p>
Kenya	<p><b>National Nutrition Action Plan (2012-17)</b></p> <p>The plan is very nutrition-specific despite recognition that the lack of cross-sectoral approaches to nutrition has hindered efforts to reduce malnutrition to date. The plan has 11 strategic objectives, of which ten focus on nutrition-specific areas of action, and one on strengthening coordination and partnerships, where WASH is recognised as a key sector. WASH is largely absent from the plan, with the exception of hygiene promotion, included as part of improving child feeding practices, under Strategic Objective 2 'Improve the nutrition status of children under five'. However, there are no targets, indicators or responsibilities assigned for hygiene promotion activities. The activity has a budget of KSH 125 million, which represents 0.18% of the plan's total budget. It is not clear what coordination mechanisms are in place to facilitate cross-sectoral working.</p>	<p><b>National Environmental Sanitation and Hygiene Policy (2007); National Water Services Strategy (2007-15) and Implementation Plan (2007)</b></p> <p>The Ministry of Health's policy clearly recognises undernutrition and particularly anaemia as a key health issue related to poor food safety linked to hygiene and sanitation. By contrast, the Ministry of Water and Irrigation's strategy and implementation plan makes no links to nutrition.</p>

	Summary of analyses of nutrition plans	Summary of analyses of WASH plans
Liberia	<p><b>National Food Security and Nutrition Strategy (2008)</b></p> <hr/> <p>WASH is included in two strategies under the policy priority on preventing and managing infectious diseases. However, the strategy lacks implementation details related to WASH, with no targets, indicators or budget included. The mechanisms for coordinating cross-sectoral participation are under the leadership of the Ministry of Agriculture, and include the Ministry of Public Works, responsible for water and sanitation.</p>	<p><b>Water, Sanitation and Hygiene Strategic Plan (2011-17)</b></p> <hr/> <p>The plan demonstrates strong recognition of the role of WASH in improving malnutrition and health. As a result, opportunities for incorporating WASH into existing national health and nutrition programmes, and campaigns that target women and children have been identified as a key priority; for example, including hygiene and sanitation promotion into immunisation days, vitamin A distribution and deworming sessions.</p>
Madagascar	<p><b>Plan National D'Action Pour la Nutrition 2012-15</b></p> <hr/> <p>The plan includes an objective on increasing access to safe WASH, with specific activities and indicators. These focus on promotion of safe water and latrine use, advocacy and behaviour-change communication, with a broad range of indicators. There are no activities around improving infrastructure, thereby only addressing the issue of 'use' and not 'access'. Overall the plan is relatively general, with activities, monitoring and evaluation, responsibilities and budget allocation not clearly defined or specific.</p>	<p><b>National WASH Strategy and Plan (2013-18)</b></p> <hr/> <p>There is no mention of nutrition key terms in either the plan or strategy.</p>

# Annex (continued)

	Summary of analyses of nutrition plans	Summary of analyses of WASH plans
<b>Malawi</b>	<p style="text-align: center;"><b>National Nutrition Strategic Plan (2013-18)*</b></p> <hr/> <p>The plan* outlines the importance of an enabling environment and working across sectors, as evident by priority three of seven which focuses on mainstreaming nutrition into other sectors. WASH is highlighted as a necessary nutrition-sensitive intervention, with a number of activities outlined under objective one on preventing and controlling the most common nutrition disorders. These are varied and extensive, ranging from integrating hygiene promotion into child health days, school WASH and training of health-care workers, along with advocacy for nutrition to be included in WASH sector plans. However, these activities are broad and lack detail around targets, indicators, costing and responsibilities.</p> <p>*A draft from 2013 but assumed to be the version in use as no other versions were identified.</p>	<p style="text-align: center;"><b>Water Sector Investment Plan (2012); National Water Policy (2005); National Sanitation Policy (2006)</b></p> <hr/> <p>The plan makes one significant reference to the connection between water and malnutrition, but only in the appendix. The National Water Policy makes no connection to nutrition and only focuses on water in relation to food security and agriculture. The National Sanitation Policy makes strong connections to nutrition in terms of hand hygiene and food preparation, including encouraging handwashing with soap (HWWS) as a key strategy.</p>
<b>Mozambique</b>	<p style="text-align: center;"><b>Multi-sectoral Action Plan for the Reduction of Chronic Undernutrition (2011-15) (&gt;2020)</b></p> <hr/> <p>The plan has a strong emphasis on multi-sectoral collaboration, with a relatively comprehensive understanding of the different pathways through which nutrition and WASH are linked, including infectious diseases and poor food hygiene. WASH activities outlined include both infrastructure and behaviour-change components, such as improving food hygiene and storage, sanitation and hygiene promotion, and community mobilisation for the construction of latrines.</p>	<p style="text-align: center;"><b>National Water Policy (2007)</b></p> <hr/> <p>There is no mention of nutrition key terms in either the plan or strategy.</p>

	Summary of analyses of nutrition plans	Summary of analyses of WASH plans
Nepal	<p><b>Multi-sector Nutrition Plan for Accelerating the Reduction of Maternal and Child Undernutrition in Nepal (2013-17) (&gt;2023)</b></p> <p>The plan comprehensively integrates many aspects of WASH important for nutrition, including hygiene behaviour change, safe disposal of child faeces and food hygiene. A water and sanitation sector review was conducted to inform the plan and identify areas of intervention. WASH forms one of the eight priorities of the plan, with a dedicated logframe outlining indicators, activities and budget. The Ministry of Urban Development was consulted in developing the plan and is specified as the key partner to deliver the WASH components. The scale up strategy will select districts based on a number of criteria for which sanitation coverage is one.</p>	<p><b>Government Sanitation and Hygiene Master Plan (2011); National Water Plan (date unknown)</b></p> <p>Although there is limited reference to WASH, the Government Sanitation and Hygiene Master Plan highlights the connection between hygiene and food safety, and aims to promote food hygiene behaviours as part of a strategy to become open defecation free. By contrast the National Water Plan makes no reference to nutrition, but heavily emphasises the role of water in food security and irrigation for agriculture.</p>
Rwanda	<p><b>National Food and Nutrition Strategic Plan (2013-18)</b></p> <p>A WASH section is included in the plan's situational analysis, which comprehensively outlines key WASH components, including water, sanitation, and food and hand hygiene. The plan prioritises hygiene based on a synthesis of the evidence of the impact on diarrhoea, with strong recognition of the importance of addressing hygiene in children during the first two years of life when they cannot use a latrine and must rely on others to take care of their hygiene. There are four WASH indicators across two strategic directions. However, these lack targets despite other indicators having targets and baselines. Although WASH experts were consulted in developing the plan, there were no representatives from the Environmental Health Department in the Ministry of Health nor from the Ministry of Infrastructure, the two ministries responsible for WASH. The coordinating mechanisms at different levels of the Government include WASH representation.</p>	<p><b>National Policy and Strategy for Water Supply and Sanitation Services (2010)</b></p> <p>Food hygiene is recognised as part of the definition of sanitation, but there is no mention of nutrition or related terms in the policy or strategy.</p>

# Annex (continued)

	Summary of analyses of nutrition plans	Summary of analyses of WASH plans
Sierra Leone	<p><b>National Food and Nutrition Security Policy Implementation Plan (2012-16)</b></p> <p>Three WASH-related strategies are included under objective four of the plan on preventing diseases: improve access, treatment and storage of water; improve household hygiene and sanitation practices; and improve food safety and hygiene practices. The food hygiene components target mostly producers rather than focusing on consumers and households. The three intervention areas all include prevalence of diarrhoea in children under five as an indicator. This highlights that the link with WASH and nutrition is mainly viewed through a diarrhoea lens, ignoring other key pathways. The plan has been costed, but only includes budget for the eight top line objectives in this plan with no breakdown by activity or intervention.</p>	<p><b>National Water and Sanitation Policy (2010)</b></p> <p>The policy highlights the connection between hygiene behaviours and food preparation, but otherwise nutrition is entirely absent, with references only to food security and agriculture.</p>
Tanzania	<p><b>National Nutrition Strategy (2011/12-15/16)</b></p> <p>The strategy is not an action plan in that it does not include specific activities and interventions, with appropriate indicators, targets and budget. There is strong reference to the multi-sectoral nature of malnutrition throughout, including the importance of WASH. However, the emphasis is on greater coordination between sectors and mainstreaming nutrition into other sectoral plans and policies, while not duplicating in this strategy. It is unclear if WASH representatives are included in the High-Level National Nutrition Steering Committee, or if they were consulted in the process of developing the strategy.</p>	<p><b>National Water Policy, Ministry of Water and Livestock Development (2002); National Water Sector Development Strategy, Ministry of Water and Irrigation (2006-15)</b></p> <p>No connection is made to nutrition in either the plan or strategy, but water is seen as crucial to food security and agriculture, and issues such as drought and the prioritisation of water uses are analysed.</p>

	Summary of analyses of nutrition plans	Summary of analyses of WASH plans
Timor-Leste	<p><b>National Nutrition Strategy (NNS) (2014-19)</b></p> <p>The strategy recognises both the contribution of nutrition-specific and nutrition-sensitive interventions. WASH is included as one of the plan's six priorities, with a focus on both infrastructural improvements and behaviour change relating to personal and food hygiene. These are monitored by three indicators with baselines and targets: access to improved drinking water; access to an improved latrine; and mothers handwashing with soap before feeding children. There are institutional arrangements in place to ensure cross-sectoral working, including a nutrition inter-ministerial committee based in the office of the Prime Minister. Furthermore, ministries engaged in implementing the strategy signed an MoU and are to allocate additional resources from their respective sectoral budgets for nutrition.</p>	<p><b>Unable to locate plans</b></p>
Uganda	<p><b>National Nutrition Action Plan (2011-16)</b></p> <p>The plan strongly recognises the contribution of poor WASH to undernutrition through its impact on disease burden. The gap analysis highlights that there is weak leadership and coordination on nutrition across all sectors and nutrition is inadequately mainstreamed into existing sectoral programmes. WASH interventions are included under an objective to improve maternal and child nutrition, which includes the promotion of proper food handling, hygiene and sanitation through increased knowledge, use of safe water, and handwashing practices at the household level. WASH representatives were not included in the nutrition technical committee responsible for developing the strategy.</p>	<p><b>Ministry of Water and Environment – District Implementation Manual (2013); Strategic Sector Investment Plan for the Water and Sanitation Sector in Uganda, Ministry of Water and Environment (2009)</b></p> <p>The manual and plan make brief reference to food safety and food hygiene, but otherwise the focus is only on water for agriculture and food security.</p>

# Annex (continued)

	Summary of analyses of nutrition plans	Summary of analyses of WASH plans
<b>Zambia</b>	<p style="text-align: center;"><b>National Food and Nutrition Strategic Plan for Zambia (2011-15)</b></p> <hr/> <p>WASH is included as one of the plan’s 11 strategic objectives: ‘increase linkages among hygiene, sanitation, infection control, and nutrition’. This is to be delivered through infrastructure (water point and latrine repair/building) and software (communication and advocacy) interventions, primarily focused at the household level and broad in remit, including safe disposal of child faeces and food hygiene. Strengthening water and sanitation facilities in schools is also included in strategic direction five on improving nutrition in schools. A comprehensive implementation matrix is included with activities and output indicators, under the responsibility of the Ministry of Local Government and Housing who hold funding responsibility.</p>	<p style="text-align: center;"><b>National Water Policy, Ministry of Energy and Water Development (2010)</b></p> <hr/> <p>Very limited connection to nutrition is made, other than the importance of water for food production, which is needed to tackle malnutrition. Water in relation to food security and agriculture is the main focus.</p>



# References

- 1 [www.worldbank.org/en/news/speech/2016/04/05/remarks-world-bank-group-president-jim-yong-kim-development-global-interdependence](http://www.worldbank.org/en/news/speech/2016/04/05/remarks-world-bank-group-president-jim-yong-kim-development-global-interdependence)
- 2 Bhutta, Z. A., Das, J. K., Rizvi, A., Gaffey, M. F., Walker, N., Horton, S., ... & Maternal and Child Nutrition Study Group (2013) Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *The Lancet*, 382(9890), 452-477.
- 3 Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., De Onis, M., ... & Uauy, R. (2013) Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet*, 382(9890), 427-451.
- 4 Prüss-Üstün A. & Corvalán, C. (2006) Preventing disease through healthy environments: towards an estimate of the environmental burden of disease. Geneva, Switzerland: WHO.
- 5 Prüss-Üstün, A., Bos, R., Gore, F. & Bartram, J. (2008) Safer water, better health: costs, benefits and sustainability of interventions to protect and promote health. WHO.
- 6 Dangour, A. D., Watson, L., Cumming, O., Boisson, S., Che, Y., Velleman, Y., ... & Uauy, R. (2013) Interventions to improve water quality and supply, sanitation and hygiene practices, and their effects on the nutritional status of children. *Cochrane Database Syst Rev*, 8.
- 7 Spears, D., Ghosh, A. & Cumming, O. (2013) Open defecation and childhood stunting in India: an ecological analysis of new data from 112 districts. *PLoS ONE*, 8(9), e73784.
- 8 Ngunjiri, F. M., Reid, B. M., Humphrey, J. H., Mbuya, M. N., Pelto, G. & Stoltzfus, R. J. (2014) Water, sanitation and hygiene (WASH), environmental enteropathy, nutrition, and early childhood development: making the links. *Annals of the New York Academy of Sciences*, 1308(1), 118-128.
- 9 Generation Nutrition (2015) The role of water, sanitation and hygiene in fight against child under-nutrition – adapted from Dangour et al., 2013. Available from: [www.susana.org/en/resources/library/details/2385](http://www.susana.org/en/resources/library/details/2385). [Accessed 19/03/16].
- 10 Humphrey, J. H., Jones, A. D., Manges, A., Mangwadu, G., Maluccio, J. A., Mbuya, M. N., ... & Tielsch, J. M. (2015) The Sanitation Hygiene Infant Nutrition Efficacy (SHINE) trial: rationale, design, and methods. *Clinical Infectious Diseases*, 61(suppl 7), S685-S702.
- 11 WASH Benefits (n.d.). WASH Benefits. Available from: [www.washbenefits.net](http://www.washbenefits.net). [Accessed 06/04/16].
- 12 UNICEF, USAID & WHO (2015) Improving nutrition outcomes with better water, sanitation and hygiene: practical solutions for policies and programmes. Geneva, Switzerland: WHO.
- 13 UNICEF, USAID & WHO (2015) Improving nutrition outcomes with better water, sanitation and hygiene: practical solutions for policies and programmes. Geneva, Switzerland: WHO.
- 14 UNICEF (1990) Strategy for improved nutrition of children and women in developing countries. A UNICEF policy review. New York: UNICEF.
- 15 UNICEF (1990) Strategy for improved nutrition of children and women in developing countries. A UNICEF policy review. New York: UNICEF.
- 16 Environmental Health Project (EHP), UNICEF/WES, USAID, World Bank/WSP & WSSCC (2004) Hygiene Improvement Framework: a comprehensive approach for preventing childhood diarrhoea. In EHP Joint publication (No. 8). Washington DC: EHP.
- 17 Auger, R. & Curtis, V. (2014) The Evo-Eco approach to behaviour change. In *Applied Evolutionary Anthropology* (pp.271-295). Springer New York.
- 18 Biran, A., Schmidt, W. P., Varadharajan, K. S., Rajaraman, D., Kumar, R., Greenland, K., ... & Curtis, V. (2014) Effect of a behaviour-change intervention on handwashing with soap in India (SuperAmma): a cluster-randomised trial. *The Lancet Global Health*, 2(3), e145-e154.
- 19 UNICEF, USAID & WHO (2015) Improving nutrition outcomes with better water, sanitation and hygiene: practical solutions for policies and programmes. Geneva, Switzerland: WHO.
- 20 Sykes, V., Chitty, A., Ensink, J., EstevesMills, J. & Majorin, F. (2015) Estimating the potential impact of sanitary child stool disposal. Available from: [www.sharesearch.org/research/estimating-potential-impact-sanitary-child-stool-disposal](http://www.sharesearch.org/research/estimating-potential-impact-sanitary-child-stool-disposal) [Accessed 19/03/16].
- 21 Gautam, O.P., EstevesMills, J., Chitty, A. & Curtis, V. (2015) Complementary food hygiene: an overlooked opportunity in the WASH, nutrition and health sectors. Available from: [www.sharesearch.org/research/complementary-food-hygiene-overlooked-opportunity-wash-nutrition-and-health-sectors](http://www.sharesearch.org/research/complementary-food-hygiene-overlooked-opportunity-wash-nutrition-and-health-sectors). [Accessed 19/03/16].
- 22 WaterAid (2016) Achieving total sanitation and hygiene coverage within a generation – lessons from East Asia. Available from: [www.wateraid.org/what-we-do/our-approach/research-and-publications/view-publication?id=85d7a0ca-181b-4d81-931b-d5b97a9456a3](http://www.wateraid.org/what-we-do/our-approach/research-and-publications/view-publication?id=85d7a0ca-181b-4d81-931b-d5b97a9456a3). [Accessed 19/03/16].
- 23 ACF, Humanitarian Aid and Civil Protection & UNICEF (2016) WASH nutrition operational manual: a practical guidebook on increasing nutritional impact through integration of WASH and nutrition programmes. (DRAFT).
- 24 Acosta, A.M. & Fanzo, J. (2012) Fighting maternal and child malnutrition: analysing the political and institutional determinants of delivering a national multi-sectoral response in six countries. A synthesis paper. Available from: [www.ids.ac.uk/files/dmfile/DFID\\_ANG\\_Synthesis\\_April2012.pdf](http://www.ids.ac.uk/files/dmfile/DFID_ANG_Synthesis_April2012.pdf). [Accessed 19/03/16].
- 25 SUN (2016) Multi-sectoral planning for nutrition (MQSUN) guidance note. Available from: <http://scalingupnutrition.org/wp-content/uploads/2016/04/MQSUN-Multi-Sectoral-Planning-Guidance-Note.pdf> [Accessed 10/05/16].





## **Acknowledgements**

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This report was written by Alexandra Chitty (London School of Hygiene and Tropical Medicine), Dan Jones (WaterAid) and Megan Wilson-Jones (WaterAid). A number of contributions were made by Fleur Anderson (WaterAid), Elisa Dehove (WaterAid), Erin Flynn (London School of Hygiene and Tropical Medicine), Patrizia Fracassi (SUN Secretariat), Henry Northover (WaterAid), Sergio Teixeira (SUN Secretariat) and Yael Velleman (WaterAid).

Comprehensive national nutrition plans are a critical first step on the road to ending malnutrition by 2030.

**To succeed, these plans must address the underlying causes of malnutrition head on. Water, sanitation and hygiene are three of the essential ingredients for success.**

Integrated plans must be supported by sufficient financing, effective coordination, timely tracking of results, and stronger institutions.

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August 2016